ATTORNEY DOCKET No.: 55320.001091 APPLICATION SERIAL NO.: 10/517,989

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior listings of claims in the application:

## **LISTING OF CLAIMS:**

- 1. (Currently Amended) An apparatus for providing an indication of <u>at least one of the correct</u> and/or<u>or\_incorrect placement of capable of detecting either or both of that</u> an endo-tracheal tube (6) for ventilation is placed correctly in a recipient or alternatively that an endo tracheal tubefor ventilation is placed incorrectly in a recipient, the apparatus comprising the following elements:
- (i) a processing unit (10) for identifying detecting impedance amplitude changes;
- (ii) a measuring unit (e) comprising at least two measuring electrodes (e1, e2) for measuring the impedance of a body, the measuring unit (e) being in communication with the processing unit (10);
- (iii) a power source for the apparatus; and

 $\underline{\text{(iv)}}$  a display or alarm device; (3, 4),

whereineharacterised in that, in use, a correct placement of the endo-tracheal tube-<u>in a recipient</u> (6) upon ventilation is indicated by the processing unit (10)<u>by</u>-<u>identifydetecting</u> a significant change in-the impedance amplitude-<u>and/or anand the</u> incorrect placement of the endo-tracheal tube (6) in a recipient upon ventilation is indicated by the processing unit (10) <u>by</u> identifydetecting a change in the impedance amplitude <u>that is</u> bell-low a <u>specified</u> threshold level+, and <u>further wherein during use of said apparatus</u> the change in the impedance amplitude <u>beingis</u> shown on the display or <u>is</u> indicated by the activation of the alarm.

2 (Currently Amended) The An-apparatus as claimed in claim 1 wherein, the apparatus is characterised in that, in use, a correct placement of the endo-tracheal tube (6)-is indicated by the processing unit (10)-identifying a significant change in the impedance amplitude above a specified threshold level and/or an incorrect placement of the endo-tracheal tube (6)-is indicated by the processing unit (10) by identifying a change in the impedance amplitude below the said

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<u>specified</u> threshold leve1, and the change in the impedance amplitude <u>being is</u> shown on the display or <u>is</u> indicated by the activation of the alarm.

- 3. (Original) An apparatus as claimed in claim 1 or claim 2 wherein, the <u>specified</u> threshold level is an impedance amplitude of 0.5 ohms.
- 4. (Currently Amended) An apparatus programmed to indicate the correct and/or incorrect placement of an endo-tracheal tube for ventilation, the apparatus comprising the following elements:
- a processing unit (10) for identifying impedance changes upon ventilation;
- a measuring unit (e) comprising at least two measuring electrodes (e1, e2) for measuring the impedance of a body, the measuring unit (e) being in communication with the processing unit (10);
- a power source for the apparatus; and
- a display or alarm device, (3, 4), characterized in that,
- -<u>wherein</u> the processing unit (10) is programmed to identify significant impedance changes above a <u>specific</u> threshold value. at least one of a display device and an alarm, wherein the <u>processing unit is programmed to identify impedance changes above or below a threshold value.</u>
- 5. (Currently Amended) The apparatus as <u>elaimedrecited</u> in claim 4 wherein, the processing unit (10) is programmed to receive an impedance measurement value, <u>and to</u>-identify if the impedance value is equal tote or greater than the <u>specific</u> threshold value, and <u>further is programmed such that</u> if the <u>specified</u> threshold value is not reached then the processing unit (10) will activate <u>either or both at least one of</u> the alarm device and/<u>or or</u> the display device to indicate thereby indicating incorrect intubation of an endo tracheal tube in a recipient.
- 6. (Currently Amended) An apparatus as claimed in claim 54 wherein, the processing unit (10) is programmed to carry out the following steps:

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receive a first impedance measurement value,

identify if there is a threshold value, if there is no threshold value adopt the first impedance measurement value as the threshold value,

receive a second impedance measurement value and

then identify if the impedance value is equal tote or greater than the adopted specified threshold level, if the threshold value is not reached then the processing unit (10) will activate the alarm device and/or the display device at least one of the alarm device and the display device to indicate incorrect intubation.

- 7. (Currently Amended) An apparatus as claimed in claim  $6\underline{4}$  wherein the processing unit (10) comprises a memory unit for the storage of measured, calculated and threshold values.
- 8. (Currently Amended) An apparatus as claimed in claim 74 wherein the processing unit (10) comprises an "on/off" switch or a three position switch comprising a first "off" position, a second "single measurement" position, and a third "monitoring" position.
- 9. (Currently Amended) An apparatus as claimed in claim 46 or claim 8 wherein the processing unit (10) is programmed to identify impedance changes which are significantly above a specified threshold value of which is 0.5 ohms.
- 10. (Currently Amended) An apparatus as claimed in <u>claim 4 any one of claims 4 to 8</u> wherein the processing unit <del>(10)</del> operations are repeated over a period of time in order to monitor the placement of the endo-tracheal tube for ventilation.
- 11. (Currently Amended) An apparatus as claimed in <u>claim 4 any one of the preceding claims</u>, wherein the alarm device comprises at least one of a sound emitting device and a light emitting device.
- 12. (Currently Amended) An apparatus as claimed in claim 4 any one of the preceding claims

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wherein the apparatus <u>further</u> comprises a user interface is adapted for inputting reference thoracic impedance values, threshold impedance values, and/or patient characteristics to the processing unit.

- 13. (Currently Amended) An apparatus <u>as claimed in claim 4, according to claim any one of the proceeding claims</u> wherein the apparatus is adapted for integration in a defibrillating device.
- 14. (Currently Amended) An apparatus as claimed <u>claim 4in any one of the preceding claims</u> wherein the apparatus <u>further comprises</u> an endo-tracheal tube (6)-for ventilation.
- 15-17. (Canceled)
- 18. (New) An apparatus for detecting the placement of an intubation tube in a recipient, the apparatus comprising:
- a source for providing a threshold value of thoracic impedance for said patient
- a measuring unit\_comprising at least two electrodes, for measuring a thoracic impedance of said patient
- a display for displaying said threshold value and the measured thoracic impedance;
- wherein the indication of placement of an intubation tube is shown on said display as a change in said measured thoracic impedance as compared to said specified threshold value.
- 19. (New) The apparatus of claim 18, wherein an increase in measured thoracic impedance as compared to the threshold value indicates a correct placement of the intubation tube in a recipient.
- 20. (New) The apparatus of claim 18, wherein an decrease in measured thoracic impedance as compared to a specified threshold value indicates an incorrect placement of the intubation tube in a recipient.

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21. (New) The apparatus of claim 18, wherein no change in measured thoracic impedance as compared to a specified threshold value indicates an incorrect placement of the intubation tube in a recipient.

- 22. (New) The apparatus of claim 18, wherein no change in measured thoracic impedance as compared to a specified threshold value indicates an correct placement of the intubation tube in a recipient.
- 23. (New) The apparatus of claim 18, wherein said source is a memory unit.
- 24. (New) The apparatus of claim 18, wherein said source is an input into a user interface.
- 25. (New) The apparatus of claim 18, wherein said threshold value is a measured value.
- 27. (New) The apparatus of claim 18, wherein said threshold value is a calculated value.
- 28. (New) The apparatus of claim 18, wherein said threshold value is a reference value.
- 29. (New) The apparatus of claim 18, wherein the apparatus further includes an endo-tracheal tube.
- 30. (New) A method for externally assessing and monitoring placement of an endo-tracheal tube for ventilation of a patient, said method comprising
- a) measuring thoracic impedance signals of a said patient;
- b) analyzing the impedance signals to identify changes in impedance over time
- c) comparing the impedance changes to a predetermined threshold value, and
- d) activating at least one of a first display and alarm device if the changes' magnitude exceeds the predetermined value.
- 31 (New). A method according to claim 30, wherein steps b-d are performed by a processing unit connected to measurement electrodes, and the threshold value is stored in a storage unit which is connected to the processing unit.

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32. (New) A method according to claim 30, wherein a start signal is given to the processing unit by a user and steps b-d are repeated during a predetermined period of time or until a stop signal is given to the processing unit by a user.

33. (New) A method for externally assessing and monitoring placement of an endo-tracheal tube for ventilation in a recipient, said method comprising

a) measuring thoracic impedance signals of a said recipient;

b) analyzing the impedance signals to identify changes in impedance over time

c) comparing the impedance changes to a predetermined threshold value, and

d) activating at least one of a first display and alarm device if the changes' magnitude does not exceed the predetermined value.

34. (New) A method according to claim 33, wherein steps b-d are performed by a processing unit connected to measurement electrodes, and the threshold value is stored in a storage unit which is connected to the processing unit.

35. (New) A method according to claim 33, wherein a start signal is given to the processing unit by a user and that steps b-d are repeated a during a predetermined period of time or until a stop signal is given to the processing unit by a user..